



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,309	12/31/2003	Nagesh K. Vodrahalli	ITS.0008US (P17998)	8796
21906 7590 09/08/2009 TROP, PRUNER & HU, P.C. 1616 S. VOSS ROAD, SUITE 750 HOUSTON, TX 77057-2631			EXAMINER STAHL, MICHAEL J	
			ART UNIT 2874	PAPER NUMBER
			MAIL DATE 09/08/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

*Ex parte* NAGESH K. VODRAHALLI, XUE-JUN YING, and RUOLIN LI

---

Appeal 2008-001143  
Application 10/751,309  
Technology Center 2800

---

Decided: September 8, 2009

---

Before ROBERT E. NAPPI, KARL D. EASTHOM and THOMAS S.  
HAHN, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 6(b) of the final rejection of claims 1 through 4, 6 through 15, and 18 through 20.

We affirm the Examiner's rejection of these claims.

### INVENTION

The invention is directed towards a method and device in an optoelectrical system which receives a signal in two wavelengths of light multiplexed together on a fiber. The device also transmits light of a third wavelength on the fiber. See pages 2 and 3 of Appellants' Specification. Claim 1 is representative of the invention and reproduced below:

1. A method comprising:  
demultiplexing at least one wavelength from a multiplexed optical signal; and  
detecting said demultiplexed wavelength using an L-shaped detector.

### REFERENCES

Fan	U.S. 6,495,813 B1	Dec. 17 2002
Takagi	U.S. 6,979,136 B2	Dec. 27, 2005
		Filed May 23, 2003

### REJECTIONS AT ISSUE

Claims 3, 4, 8 through 10, 14, 15, 18 through 20 are rejected by the Examiner under 35 U.S.C. § 112 second paragraph.

Claims 1, 6, 7, and 11 are rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by Fan. The Examiner's rejection is on page 4 of the Answer.<sup>1</sup>

Claims 1, 2, 12, and 13 are rejected by the Examiner under 35 U.S.C. § 102(e) as being anticipated by Takagi. The Examiner's rejection is on page 4 of the Answer.

## ISSUES

### Rejection under 35 U.S.C. § 112 second paragraph

In the final rejection dated July 27, 2006 the Examiner rejected claims 3, 4, 8 through 10, 14, 15, and 18 through 20 under 35 U.S.C. § 112 second paragraph. Appellants in the Brief have not identified that this rejection is on Appeal. However, the Notice of Appeal, dated October 2, 2006, identifies that Appellants are appealing the "decision of the Primary Examiner dated July 27, 2006 finally rejecting Claim(s) 1-4, 6-15, and 18-20." The Examiner has stated that the rejection under 35 U.S.C. § 112 second paragraph, set forth in the final rejection has not been withdrawn. Answer 2. Accordingly, the rejection of claims 3, 4, 8 through 10, 14, 15, and 18 through 20 under 35 U.S.C. § 112 second paragraph is before us. As Appellants have not presented any arguments directed to this rejection in the

---

<sup>1</sup> Throughout the opinion, we make reference to the Answer dated January 3, 2007 for the respective details thereof.

Brief,<sup>2</sup> there are no issues before us concerning this rejection and we sustain the rejection *pro forma*.

Anticipation rejection based upon Fan.

Appellants argue, on page 5 of the Brief<sup>3</sup> that the rejection of claims 1, 6, 7, and 11 as being anticipated by Fan is in error. Appellants argue that: Fan has nothing to do with multiplexed optical signals, and the Examiner's interpretation of the claim limitation directed to "multiplexed" defies conventional usage and simply reads "multiplexed" to cover anything.

Thus, Appellants' arguments directed to the rejection of claim 1<sup>4</sup> presents us with the issue: have Appellants shown that the Examiner erred in construing the claim term "multiplexed," and in determining that Fan relates to multiplexed optical signals?

Anticipation rejection based upon Takagi

Appellants argue, on pages 5 and 6 of the Brief that the rejection of claims 1, 2, 12, and 13 as being anticipated by Takagi is in error. Appellants argue that Takagi does not teach an L shaped detector as recited in claim 1 Brief 5. Further, Appellants argue that the rejection of claim 12 is in error as

---

<sup>2</sup> Appellants by not presenting any arguments directed to these claims have waived any arguments which could have been made with respect to this rejection. See 37 C. F.R. 41.37 (c)(1) (vii).

<sup>3</sup> Throughout the opinion, we make reference to the Brief dated October 30, 2006 for the respective details thereof

<sup>4</sup> Appellants' arguments group claims 1, 6, 7, and 11 together, we select claim 1 as representative of the group.

the Examiner's interpretation of the claim limitation directed to "integrated" is improper.

With respect to the rejection of claims 1 and 2, Appellants' arguments present us with the issue: have Appellants shown that the Examiner erred in finding that the Takagi teaches an L shaped detector as recited in claim 1?

With respect to the rejection of claims 12 and 13, Appellants' contentions present us with the issue: have Appellants shown that the Examiner erred in construing the claim term "integrated," and in determining that Takagi anticipates claim 12?

#### PRINCIPLES OF LAW

"During examination, 'claims . . . are to be given their broadest reasonable interpretation consistent with the specification, and . . . claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.'" *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)(quoting *In re Bond*, 910 F.2d 831, 833 (Fed. Cir. 1990)); *see also In re Morris*, 127 F.3d 1048, 1053-54 (Fed. Cir. 1997).

"Absent an express definition in their specification, the fact that appellants can point to definitions or usages that conform to their interpretation does not make the PTO's definition unreasonable when the PTO can point to other sources that support its interpretation." *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997). "It is the applicants' burden to precisely defined the invention, not the PTO's." *Id.*

### FINDINGS OF FACT

1. Fan teaches an array of light collected for color image cameras with L-shaped photodetectors. Abstract.
2. Takagi teaches a fiber type optical module which receives light in two wavelengths and emits light in a third wavelength. The module uses filters which transmit light of one frequency while reflecting other wavelengths to direct light to two light receiving elements and a light emitting element. Abstract.
3. Takagi teaches an embodiment in Figure 17 where a signal of light of two wavelengths enters through item 11. At filter, item 5, light of wavelength  $\lambda_A$  is transmitted to light reception means, item 13, which includes a light detector. Filter, item 5, reflects light of wavelength  $\lambda_B$  via fiber, item 21*d*, to filter, item 6, which reflects the light to light reception means, item 14, which includes a light detector. Figure 17, Col. 2, ll. 10-31.
4. The light reception means, item 13, is depicted in Figures 20A and 20B. The light reception means, item 13, includes a light receiving device, item 2, which is connected to a circuit board, item 63. As can be seen from Figures 20A and 20B the light receiving device, item 2, and circuit board, item 63, are roughly perpendicular and form an L shape. Takagi, col. 5, l. 61- col. 6, l. 2, Figures 20A and 20B.

## ANALYSIS

### Anticipation rejection based upon Fan.

We are not persuaded that the Examiner erred in construing the claim term “multiplexed” and in determining that Fan relates to multiplexed optical signals. The Examiner states:

One publicly available dictionary (<http://dictionary.oed.com/>) has defined “multiplexed” as “subjected to the action of a *multiplexer*”. It further defined “multiplexer” as “a device which takes several *signals* and transmits them over a single *channel* without loss of their identity”. It defined “signal” as “a modulation of an electric current, electromagnetic wave, or the like by means of which information is conveyed from one place to another; the current or wave itself; also, a current or wave whose presence is regarded as conveying information about the source from which it comes” (emphasis added). Finally, it defined “channel” as “that through which information, news, trade, or the like passes; a medium of transmission, conveyance, or communication; means agency” (emphasis added). Therefore in the Fan device light coming from the object to be imaged may be regarded as a signal because it is a wave whose presence conveys information about the source from which it comes (i.e., that object). At least a microlens element 57 (or 58) may be regarded as a multiplexer since it takes several signals (at least signals at different wavelengths) and transmits them over a single channel without loss of their identity. The material of a microlens, or any other transparent material between it and a filter, may be regarded as a channel since it acts as a medium of transmission. Accordingly, the interpretation of various broad claim terms in the rejection based on Fan is believed to be consistent with conventional definitions.

Answer 5-6. Thus, contrary to the Appellants’ argument, the Examiner has shown that in construing the claim term “multiplexed” a common usage was applied and the term is not construed to “cover anything.”



Further, Appellants have not shown that the Examiner's interpretation is inconsistent with Appellants' Specification which, on page 2, discusses multiplexed optical signals as two wavelengths of light traveling through a fiber and where de-multiplexing is performed by filters which pass only one of the wavelengths. Appellants' arguments, which merely assert that the Examiner's construction defies convention, do not lend clarity to the issue of claim interpretation by proffering a definition. "The problem in this case is that the appellants failed to make their intended meaning explicitly clear." *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997). "It is the applicants' burden to precisely define the invention, not the PTO's." *Id.* Accordingly, Appellants have not persuaded us that the Examiner erred in rejecting claims 1, 6, 7, and 11 over Fan.

*Anticipation rejection based upon Takagi*

Claims 1 and 2.

Appellants have not persuaded us that the Examiner erred in finding that the Takagi teaches an L shaped detector as recited in claim 1. Claim 1 recites "detecting said de-multiplexed wavelength using an L-shaped detector." Appellants Specification describes the L-shaped detector with respect to Figure 3 as consisting of detector element 44 which is attached to "package portions 46 and 48" which are electrically connected at 90 degrees to form an L-shaped mount. Specification 4. Thus, the scope of the claimed L-shaped detector includes a detector that is an assembly of a detector element, and other electrical elements which are combined to make up a package.

The Examiner has found that Takagi teaches an L-shaped detector as Figure 20A and 20B depicts detector element (item 2) and circuit board 63

are electrically connected and form an L-Shaped. We find ample evidence to support this finding by the Examiner. Fact 4. We are not persuaded by Appellants' argument that considering photodiode (item 2) and circuit board (63) as being the detector is inconsistent with normal usage. As discussed *supra*, interpreting the claim in light of Appellants' Specification, it is clear that the claimed L-Shaped detector includes more than just the detecting element. Accordingly, Appellants have not persuaded us of error in the Examiner's rejection of claims 1 and 2 over Takagi.

#### Claims 12 and 13

Appellants' arguments have not persuaded us that the Examiner erred in construing the claim term "integrated" and in determining that Takagi anticipates claim 12. The Examiner states:

[T]he definition of "integrated" as "uniting in one system several constituents previously regarded as separate", one can see that the reflector (part of element 5) which was previously separate has been united with other previously separate parts to form the demultiplexer system of fig. 17. To assert that "everything in the world" is part of that system does not seem appropriate.

Answer 7. Thus, contrary to the Appellants' argument, the Examiner has shown that the term "integrated" is construed as being narrower than "everything in the world is integrated" Brief 11. Further, Appellants have neither shown that the Examiner's interpretation is inconsistent with Appellants' Specification nor have Appellants proffered a definition of the term "integrated." Thus, Appellants failed to make the intended meaning of the claim term explicitly clear. As such we consider the Examiner's interpretation of the term "integrated" to be reasonable. We note that

Appellants have not presented an argument or evidence that Takagi fails to teach an integrated reflector as claimed.

Appellants' additional argument that the Examiner has admitted that Takagi fails to teach a reflector passing a wavelength to be detected is not persuasive. The Examiner has stated that a different interpretation of Takagi has been adopted and that the Examiner considers component 5 of Takagi to be a reflector that passes a wavelength  $\lambda_A$ . Answer 4 and 7. We find ample evidence to support the Examiner's finding that the filter/reflector item 5 of Takagi passes one wavelength and reflects others. Fact 3.

Thus, Appellants' arguments have not persuaded us of error in rejection of claims 12 and 13 based upon Takagi.

#### SUMMARY

In summary, we sustain the Examiner's rejections of claims 1 through 4, 6 through 15, and 18 through 20.

#### ORDER

The decision of the Examiner to reject claims 1 through 4, 6 through 15, and 18 through 20 is affirmed.

Appeal 2008-001143  
Application 10/751,309

No period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

ELD

TROP, PRUNER & HU, P.C.  
1616 S. VOSS ROAD, SUITE 750  
HOUSTON, TX 77057-2631